

"Mass and Weight" Review:

• Chart at bottom:

$$F_g = Ma_g \leftarrow \text{"gravitational constant"}$$

$$\text{- Venus: } M = \frac{F_g}{a_g} = \frac{135 \text{ N}}{8.9 \text{ m/s}^2} = 15.2 \text{ kg}$$

$$\begin{aligned} \text{- Earth: } F_g &= Ma_g = (18 \text{ kg})(9.8 \text{ m/s}^2) \\ &= 176.4 \text{ N} \end{aligned}$$

"Free Body Diagrams" Review:

4. 3N to the right → acceleration to the right

5. 4N to the left

6. Forces left and right: → +
(8N right) (13N right)
 $F_{\text{Total}} = F_{\text{App}} + F_{\text{friction}}$

$$\begin{aligned} F_{\text{friction}} &= F_{\text{total}} - F_{\text{APP}} \\ &= 8\text{N} - 13\text{N} \\ &= -5\text{N} \end{aligned}$$

7. 13N left